

WHAT IS CLAIMED IS:

1. A toner comprising an agglomerate of particles obtained by agglomerating a mixture comprising primary polymer particles and primary colorant particles, wherein the toner has a THF insoluble content of the toner of from 15% to 80% by weight and the toner comprises a wax having a melting point of 30 to 100°C.
2. A toner comprising an agglomerate of particles obtained by agglomerating a mixture comprising primary polymer particles and primary colorant particles, wherein binder resin contained in the toner has a THF insoluble content of from 10% to 70% and the toner comprises a wax having a melting point of 30 to 100°C.
3. The toner according to claim 1 or 2, wherein said THF insoluble content of the primary polymer particles is from 15% to 70% by weight.
4. A toner comprising an agglomerate of particles obtained by agglomerating a mixture comprising primary polymer particles and primary colorant particles, wherein said primary polymer particles comprise units obtained from one or more monomers and a polyfunctional monomer, wherein said polyfunctional monomer is present in an amount of from 0.005 to 5% by weight and the toner comprises wax having a

melting point of 30 to 100°C.

5. The toner as claimed in claim 1, wherein the THF insoluble content of the toner is from 20% to 70% by weight.

6. The toner as claimed in claim 1, wherein the primary polymer particles comprise units obtained from a monomer containing either a Brönsted acidic group or a Brönsted basic group.

7. The toner as claimed in claim 3, wherein the primary polymer particles comprise units obtained from 0.5 to 5% by weight of acrylic acid or methacrylic acid, based on total amount of primary polymer particles.

8. The toner as claimed in claim 1, wherein the wax has a melting point of 40 to 90°C.

9. The toner as claimed in claim 1, wherein the wax is contained in the toner in an amount of from 1 to 40 parts by weight based on 100 parts by weight of a binder resin in the toner.

10. The toner as claimed in claim 1, wherein the wax comprises an aliphatic alcohol ester of an aliphatic carboxylic acid having 20 to 100 carbon atoms.

11. The toner as claimed in claim 10, wherein the wax comprises three or more different wax compounds.

12. The toner as claimed in claim 11, wherein at least two of the three or more wax compounds are aliphatic

alcohol est rs of an aliphatic carboxylic acid having 20 to 100 carbon atoms.

13. The toner as claimed in claim 1, wherein the wax comprises an aliphatic carboxylic acid ester or an aliphatic carboxylic acid partial ester of a polyhydric alcohol.

14. The toner as claimed in claim 13, wherein the polyhydric alcohol is pentaerythritol.

15. The toner as claimed in claim 1, wherein the primary polymer particles are obtained by emulsion polymerization with a particulate wax as seed.

16. The toner as claimed in claim 15, wherein the particulate wax has an average volume particle diameter of from 0.01 to 3  $\mu\text{m}$ .

17. The toner as claimed in claim 1, wherein the agglomerate of particles obtained by agglomerating at least primary polymer particles and primary colorant particles is at least substantially coated with a particulate resin.

18. The toner as claimed in claim 17, wherein the toner is a negatively charged toner.

19. The toner as claimed in claim 17, wherein the primary polymer particles have a THF insoluble content of from 15% to 70%.

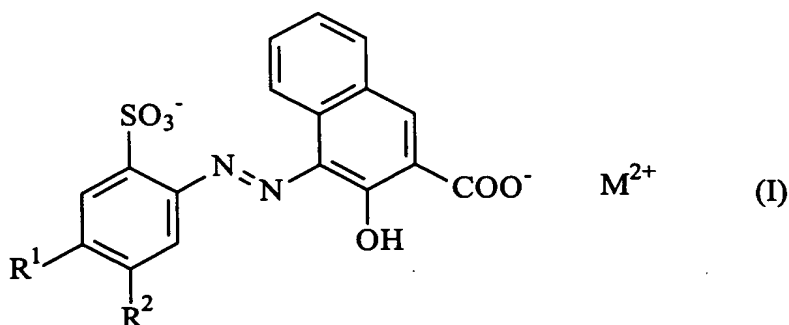
20. The toner as claimed in claim 17, wherein the particulate r sin has a THF insoluble content of from 5%

to 70%.

21. The toner as claimed in claim 17, wherein the primary polymer particles comprise a polyfunctional monomer in an amount of from 0.005 to 5% by weight and the particulate resin comprises a polyfunctional monomer in an amount of from 0.005 to 5% by weight.

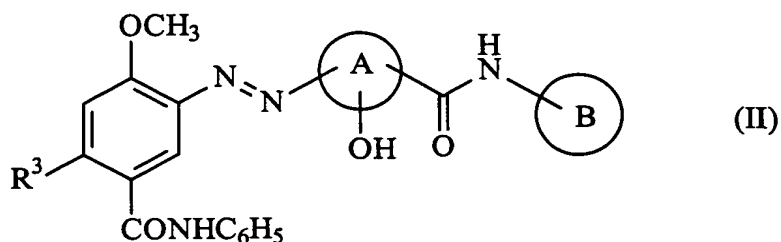
22. The toner as claimed in claim 17, wherein the particulate resin is substantially free from wax.

23. The toner for the development of an electrostatic image as claimed in claim 1, wherein the primary colorant particles comprise a colorant compound represented by the following formula (I):



wherein  $R^1$  and  $R^2$  each independently represents a hydrogen atom, an alkyl group or a halogen atom, provided that at least one of  $R^1$  and  $R^2$  is a halogen atom, and M represents Ba, Sr, Mn, Ca or Mg.

24. The toner as claimed in claim 1, wherein the primary colorant particles comprise a colorant compound represented by the following formula (II):



wherein A and B each, independently, represents an aromatic ring which can be substituted, and R<sup>3</sup> represents a hydrogen atom, a halogen atom, a nitro group, a cyano group, a hydrocarbon group having 1 to 5 carbon atoms, an alkoxy group having 1 to 5 carbon atoms, an aminosulfonyl group wherein the nitrogen atom may be substituted or an aminocarbonyl group wherein the nitrogen atom may be substituted.

25. The as claimed in claim 1, wherein the toner has a ratio of volume-average particle diameter and number-average particle diameter (volume-average particle diameter/number-average particle diameter) of from 1 to 1.25.

26. The toner as claimed in claim 1, wherein wherein the toner has a 50% circular d gree of from 0.95 to 1.

27. The toner as claimed in claim 1, wherein the toner has a volume-average particle diameter of from 7 to 10  $\mu\text{m}$ , and 10% by volume or less of the toner has a particle diameter of 5  $\mu\text{m}$  or less.

28. The toner as claimed in claim 1, wherein the toner has a volume-average particle diameter of from 7 to 10  $\mu\text{m}$ , and 5% by volume or less of the toner has a particle diameter of 15  $\mu\text{m}$  or more.

29. The toner as claimed in claim 1, wherein the primary polymer particles have a THF-soluble component having a weight-average molecular weight of from 30,000 to 500,000.

30. A method for producing a toner comprising agglomerating at least primary polymer particles and primary colorant particles to form an agglomerate of particles, wherein the primary polymer particles are produced by emulsion polymerization of a monomer mixture comprising 0.005 to 5% of a polyfunctional monomer, and the toner comprises wax having a melting point of 30 to 100°C.

31. The method of claim 30, further comprising aging the agglomerate of particles at a temperature equal to or greater than  $T_g$  of the primary polymer particles.

32. The method of claim 30, further comprising coating at least a substantially portion of the surface of the agglomerate of particles with a particulate resin.

33. The method of claim 32, wherein said coating of the agglomerate of particles with the particulate resin is performed between said agglomerating and aging steps.

34. The method of claim 32, wherein said coating of the agglomerate of particles with the particulate resin is performed after said aging step.

35. The method of claim 34, further comprising a second aging step following said coating step.

36. The method of claim 30, wherein the primary polymer particles are produced by seed emulsion polymerization of a monomer mixture comprising 0.005 to 5% of a polyfunctional monomer in the presence of a particulate wax having a melting point of 30 to 100°C.

37. The method of claim 32, further comprising coating at least a substantial portion of the surface of said agglomerate of particles with a particulate charge control agent.

38. The method of claim 37, wherein said particulate resin and said particulate charge control agent are both coated between said agglomerating step and said aging step.

39. The method of claim 37, wherein said particulate resin is coated between said agglomerating step and said aging step and said charge control agent is coated after said aging step.

40. The method of claim 39, further comprising a

second aging step following said coating of said charge control agent.

41. The method of claim 37, wherein said charge control agent is coated between said agglomerating step and said aging step and said particulate resin is coated after said aging step.

42. The method of claim 41, further comprising a second aging step following said coating of said particulate resin.

43. The method of claim 37, wherein both of said particulate resin and said charge control agent are coated after said aging step.

44. The method of claim 43, further comprising a second aging step following said coating of both of said particulate resin and said charge control agent.

45. The method of claim 32, wherein the particulate resin is produced by emulsion polymerization of a monomer mixture comprising 0.005 to 5% of a polyfunctional monomer.

46. The method of claim 32, wherein the particulate resin has a volume-average particle diameter of from 0.02 to 3  $\mu\text{m}$ .

47. The method of claim 32, wherein the particulate resin is substantially free of wax.

48. A method for producing a toner comprising agglomerating a mixture of at least primary polymer



particles and primary colorant particles to form an agglomerate of particles, and coating at least a substantial portion of the surface of said agglomerate of particles with a particulate resin, wherein the primary polymer particles are produced by seed emulsion polymerization of a monomer mixture substantially free of a polyfunctional monomer, in the presence of a particulate wax having a melting point of 30 to 100°C, and the particulate resin is obtained by emulsion polymerization of a monomer mixture comprising 0.005 to 5% of a polyfunctional monomer.

49. The method of claim 30, wherein the primary polymer particles are produced by emulsion polymerization of a monomer mixture comprising 0.5 to 5% by weight of a monomer having a Brönsted acidic group or a Brönsted basic group.

50. The method of claim 33, wherein said particulate resin is substantially free from wax and wherein said aging step is performed at a temperature range of from a glass transition temperature of a binder resin constituting the agglomerate of particles ( $T_g$ ) to  $T_g + 80^\circ\text{C}$ .

51. The method of claim 36, wherein the particulate wax is produced by dispersing one or more wax compounds in water having a temperature higher than a melting temperature of the particulate wax, in the presence of an

emulsifier.